

Data Validation Checklist Inorganic Analyses

Project: 35TH Avenue Superfund Site
 Laboratory: TestAmerica – Savannah, GA
 Method: SW-846 6010C (Aluminum, arsenic, iron, and lead)
 Matrix: Soil
 Reviewer: Karen M Trujillo, URS Group, Inc.
 Concurrence¹: Martha Meyers-Lee, URS Group, Inc.

Project No: 60430028; 1
 Job ID.: 680-109515-1
 Associated Samples: Refer to **Attachment A** (Sample Summary)
 Samples Collected: 01/26/2015
 Date: 10/20/2015
 Date: 10/23/2015

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
1. Were sample preservation requirements met? If pH of aqueous sample >2 and was not adjusted by laboratory prior to analysis, J- flag positive results and R- flag non-detect results.			✓		
2. Were all COC records signed and integrity seals intact, indicating that COC was maintained for all samples?	✓				
3. Were there any problems noted in laboratory data package concerning condition of samples upon receipt?		✓			
4. Do any soil/sediment samples contain more than 50% water? If yes, then results are to be reported on a wet-weight basis.		✓			
5. Have any technical holding times, determined from date of collection to date of analysis, been exceeded? (Hg: ≤28 days, other metals: ≤6 months; Cr+6: ≤24 hours from extraction). If not, then J- flag positive results and R- flag non-detect aqueous results.		✓			
6. Were results for all project-specified target analytes reported?	✓				
7. Were project-specified Reporting Limits achieved for undiluted sample analyses?		✓		<p>Resident Soil RSL with THQ = 1.0 (ORNL, June 2015) for target analytes:</p> <ul style="list-style-type: none"> Aluminum: 77,000 mg/Kg Arsenic: 0.68 mg/Kg Iron: 55,000 mg/Kg Lead: 400 mg/Kg <p>The MDL for each target analyte is less than or equal to the respective above-mentioned RSL in undiluted samples, except for arsenic in the following samples:</p> <ul style="list-style-type: none"> 680-109515-1 (CV0511A-CS6"), MDL is 0.69 mg/Kg 680-109515-4 (CV0511A-CS24"), MDL is 0.69 mg/Kg 680-109515-6 (CV0511AB3-GS12"), MDL is 0.71 mg/Kg 680-109515-7 (CV0511AB3-GS18"), MDL is 0.78 mg/Kg 680-109515-8 (CV0511AB3-GS24"), MDL is 0.73 mg/Kg 	

¹ Independent technical reviewer

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
				<ul style="list-style-type: none"> 680-109515-9 (CV0511AB3-CS0-4"), MDL is 0.83 mg/Kg 680-109515-12 (CV0511AB2-GS18"), MDL is 0.78 mg/Kg 680-109515-14 (CV0511AB2-CS0-4"), MDL is 0.83 mg/Kg <p>The reporting limit objective for arsenic was not met in the above-mentioned samples due to the moisture content ranging from 16.5 to 39.4%. A data gap does not exist as arsenic was detected in the samples.</p>	
8. Were method blank (MB) prepared at the appropriate frequency (one per 20 samples, batch, matrix, and level)?	✓				
9. Was a calibration blank (ICB/CCB) analyzed at the beginning, after every 10 th sample, and at the end of each analytical run?	✓				
10. Were target analytes detected in the method and/or calibration blanks?		✓		Target analyte was not detected in the method blank. Calibration blanks were not evaluated.	
11. Were target analytes reported in equipment/rinsate blanks analyses above the DL?			✓	According to the QAPP, a rinsate blank is to be collected after each decontamination event, which occurs once per week per the client. A rinsate blank is not associated with this sampling event. Blank contamination will be evaluated based on method blank results.	
12. Were contaminants detected in samples below the blank contamination action level? <ul style="list-style-type: none"> If blank result > RL, <ul style="list-style-type: none"> Flag sample results ≤ RL with a U Flag positive sample results > RL and ≤10x blank result, as J+ positive results If blank result ≤RL, <ul style="list-style-type: none"> Flag sample results ≤ RL with a U Flag positive sample results > RL and ≤10x blank result, as J+ positive results 			✓	Target analytes were not detected during the analysis of the method blank. An evaluation of the effect of blank contamination on soil sample results was based on method blank results, and not calibration blank results.	
13. Are there negative laboratory blank results with the absolute value ≤RL? If yes, then flag positive and non-detect sample results that are < 10x absolute blank value as J- and UJ, respectively.		✓			
14. Was a field duplicate analyzed?		✓			
15. Was precision deemed acceptable as defined by the project plans?			✓		
16. Were initial and continuing calibration standards analyzed at the lab/project-specified frequency for each instrument? <ul style="list-style-type: none"> 6010C: <ul style="list-style-type: none"> ICAL: Blank and one standard ICV initially, and CCV every 10th sample and at the end of the analytical run Lower Limit of Quantitation Check Sample (CRI) to be analyzed after establishing lower laboratory reporting limits and as needed 7471A: <ul style="list-style-type: none"> ICAL: Blank and five standards 	✓			6010C: 02/03/2015 and 02/04/2015. One blank and one standard initially. ICV initially, and CCV every 10 samples and at end of run. CRI after initial calibration blank analysis.	

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
<ul style="list-style-type: none"> ICV initially, and CCV every 10th sample and at the end of the analytical run 7196A: <ul style="list-style-type: none"> ICAL: Blank and minimum of five standards ICV initially, and CCV every 10th sample (15th per Method) and at the end of the analytical run 					
17. Were these results within lab/project specifications? <ul style="list-style-type: none"> 6010C <ul style="list-style-type: none"> ICV/CCV (Criteria: 90-110%R): <ul style="list-style-type: none"> If %R <75, then J- flag positive results and R-flag non-detects If 75-89%R, then J- flag positive results and UJ flag non-detects If 111-125%R, then J flag positive results If >125%R, then J+ flag positive results If >160%R, then R flag positive results CRI (Method: 70-130%R, Laboratory: 50-150%R; Project: 50-150%R for Sb, Pb, and Tl, and 70-130%R for all other analytes): <ul style="list-style-type: none"> If CRI %R <50 (<30% for Sb, Pb, Tl), then R flag results ≤ 2x RL and J flag positive results >2x RL If CRI %R 50-69% (30-49% for Sb, Pb, Tl), then J- and UJ flag positive results <2x RL and ND, respectively If CRI %R >130% and ≤180% (>150%, but ≤200% for Sb, Pb, Tl), then J+ flag positive results <2x RL If CRI %R >180% (>200% for Sb, Pb, Tl), then R flag positive results 7471A <ul style="list-style-type: none"> ICV/CCV (Criteria: 80-120%R): <ul style="list-style-type: none"> If correlation coefficients <0.995, then J and UJ flag positive and non-detect results. If %R <65, then J- flag positive results and R-flag non-detects If 65-79%R, then J- flag positive results and UJ flag non-detects If 121-135%R, then J flag positive results If >135%R, then J+ flag positive results If >170%R, then R flag positive results CRI (Method: Not required, Laboratory: 50-150%R, Project: 70-130%R): <ul style="list-style-type: none"> If CRI %R <50, then R flag results ≤ 2x RL and J flag positive results >2x RL If CRI %R 50-69%, then J- and UJ flag positive results <2x RL and ND, respectively If CRI %R >130% and ≤180%, then J+ flag positive 	✓				

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
<ul style="list-style-type: none"> results <2x RL <ul style="list-style-type: none"> ▪ If CRI %R >180%, then R flag positive result ○ 7196A: <ul style="list-style-type: none"> • ICV/CCV (Criteria: 90-110%R): <ul style="list-style-type: none"> ▪ If correlation coefficients <0.995, then J and UJ flag positive and non-detect results. ▪ If %R <65, then J- flag positive results and R-flag non-detects ▪ If 65-90%R, then J- flag positive results and UJ flag non-detects ▪ If 110-135%R, then J flag positive results ▪ If >135%R, then J+ flag positive results ▪ If >170%R, then R flag positive results 					
18. Was the interference check sample (ICS) analyzed at the beginning of each ICP analytical run?	✓				
19. Are ICS recoveries within 80-120% of the true value? If not, qualify data as follows when native Al, Fe, Ca, and Mg sample concentrations are equal to or greater than the ICS spiking level: <ul style="list-style-type: none"> ○ If >120%R (or >true value plus 2x CRQL), J+ flag positive results ○ If 50-79%R (or less than true value – 2x the CRQL), J- flag positive results and UJ flag non-detects ○ If <50%R, J- flag positive results and R-flag non-detects 	✓				
20. Was a LCS analyzed for each preparation batch (one per 20 samples per matrix and level)?	✓				
21. Did LCS recoveries meet method/laboratory/project (80-120%R) specifications? <ul style="list-style-type: none"> ○ Soil: <ul style="list-style-type: none"> • LCS result > Upper control limit (UCL): J+ flag positive results • LCS result < Lower control limit (LCL): J- flag positive results and UJ flag non-detects ○ Aqueous: <ul style="list-style-type: none"> • If <50%R, then J- and R flag positive and ND results, respectively • If 50-LCL%R, J- and UJ flag positive and ND results, respectively • >UCL: J+ Flag positive results • >150%R: R Flag results 	✓				
22. Was the RPD between LCS and LCSD results within method/laboratory /project control limits (≤20%RPD)? If not, J and UJ flag positive and non-detect results, respectively			✓	LCS only	
23. Was a Matrix Spike (MS) and Matrix Spike Duplicate (MSD) analyzed once per preparation batch?	✓			Batch 369174: 680-109515-6 (CV0511AB3-GS12"), MS/MSD/PDS	

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
24. Is the MS and MSD parent sample a project-specific sample?	✓				
25. Was a post-digestion spike (PDS) analysis conducted when MS and/or MSD results did not meet control limits (Note: PDS is not required for silver, mercury, or hexavalent chromium)?	✓			680-109515-6 (CV0511AB3-GS12")	
26. For all analytes with sample concentration < 4 x spike concentration, are spike recoveries within method (6010C: 75-125%R MS/MSD and 80-120%R PDS; 7471A: 80-120%R MS/MSD; 7196A: 85-115%R MS), laboratory (MS, MSD, and PDS: 75-125%R for 6010C/7471 (as applicable) and 80-120%R for 7196), and project (as noted below) specifications? <i>Only QC results for project samples are evaluated.</i> If not, <ul style="list-style-type: none">6010C:<ul style="list-style-type: none">If MS %R <30 and PDS %R <75, then J- and R Flag positive and ND results, respectivelyIf MS %R <30 and PDS %R >75, then J flag positive and UJ flag non-detect resultsIf MS and MSD %R 30-74 and PDS%R <75, then J- flag positive and UJ flag non-detect resultsIf MS and MSD %R 30-74 and PDS%R ≥75, then J flag positive and UJ flag non-detect resultsIf MS, MSD, and PDS %R >125, J+ flag positive resultsIf MS and MSD %R >125 and PDS %R ≤125, then J flag positive resultsIf MS and MSD %R <30 and no PDS, then J- flag positive and R-flag non-detect resultsIf MS and MSD %R 30-74 and no PDS, then J- and UJ flag positive and non-detect results, respectivelyIf MS and MSD %R >125 and no PDS, then J+ flag positive results7471A/7196:<ul style="list-style-type: none">If MS %R <30, then J- and R Flag positive and ND results, respectivelyIf MS and MSD %R 30-LCL, then J- flag positive and UJ flag non-detect resultsIf MS and MSD %R >UCL, then J+ flag positive results	✓		CV0511AB3-GS12" (680-109515-6): Arsenic MS and MSD @134 and 110%R (75-125%R); PDS @ 96%R (80-120%R). Qualification of data is not warranted, as the MSD recovery met control limits.		
27. For all analytes with sample concentration < 4 x spike concentration, were laboratory/project (≤20%RPD) criteria met for precision during the MS and MSD analysis? <i>Only QC results for project samples are evaluated.</i> <ul style="list-style-type: none">If RPD >20%, J and UJ flag positive and non-detect results.	✓				
28. Was a serial dilution conducted for 6010C/EPA 200.7?	✓				
29. Is the serial dilution parent sample a project-specific sample?	✓			680-109515-6 (CV0511AB3-GS12")	
30. Is the percent difference between the serially diluted result and	✓				

Data Validation Checklist (Continued)

Review Questions	Yes	No	N/A	Samples (Analytes) Affected/Comments	Flag
undiluted result less 10% (for those analytes with native concentrations greater than 50x the DL)? <i>Only QC results for project samples are evaluated.</i> <ul style="list-style-type: none"> ○ If %D >10, J and UJ flag positive and non-detect results, respectively. 					
31. Was a laboratory duplicate analyzed?		✓			
32. Was the lab duplicate analysis conducted on a project-specific sample?			✓		
33. Were criteria for laboratory/project precision met? <i>Only QC results for project samples are evaluated.</i> <ul style="list-style-type: none"> ○ If RPD values >20% (35% for soil/sediment) or absolute difference > RL (2x RL for soil/sediment), then J and UJ flag positive and non-detect results, respectively 			✓		
34. Were lab comments included in report? If yes, summarize contents or attach a copy of the narrative.	✓			Refer to Attachment B (Case Narrative)	
Comments: The data validation was conducted in accordance with the <i>Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama, Revision 1</i> (OTIE, October 2012). The data review process was modeled after the <i>USEPA Contract Laboratory Program (CLP) National Functional Guidelines (NFG) for Inorganic Data Review</i> (EPA 540-R-04-004, October 2004). Sample results have been qualified based on the results of the data review process (Attachment C). Criteria for acceptability of data were based upon available site information, analytical method requirements, guidance documents, and professional judgment					

DV Flag Definitions:

- J- The result is an estimated quantity, but the result may be biased low.
- J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
- J+ The result is an estimated quantity, but the result may be biased high.
- R The data are unusable. The sample results are rejected due to serious deficiencies in meeting Quality Control (QC) criteria. The analyte may or may not be present in the sample.
- U The analyte was analyzed for, but was not detected above the associated level; blank contamination may exist.
- UJ The analyte was analyzed for, but was not detected. The reported limit is approximate and may be inaccurate or imprecise.

ATTACHMENT A
SAMPLE SUMMARY

SAMPLE SUMMARY

Client: Oneida Total Integrated Enterprises LLC

Job Number: 680-109515-1

Sdg Number: 680-109515-01

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
680-109515-1	CV0511A-CS6"	Solid	01/26/2015 1350	01/31/2015 0852
680-109515-2	CV0511A-CS12"	Solid	01/26/2015 1355	01/31/2015 0852
680-109515-3	CV0511A-CS18"	Solid	01/26/2015 1400	01/31/2015 0852
680-109515-4	CV0511A-CS24"	Solid	01/26/2015 1405	01/31/2015 0852
680-109515-5	CV0511AB3-GS6"	Solid	01/26/2015 1435	01/31/2015 0852
680-109515-6	CV0511AB3-GS12"	Solid	01/26/2015 1440	01/31/2015 0852
680-109515-6MS	CV0511AB3-GS12"	Solid	01/26/2015 1440	01/31/2015 0852
680-109515-6MSD	CV0511AB3-GS12"	Solid	01/26/2015 1440	01/31/2015 0852
680-109515-7	CV0511AB3-GS18"	Solid	01/26/2015 1445	01/31/2015 0852
680-109515-8	CV0511AB3-GS24"	Solid	01/26/2015 1450	01/31/2015 0852
680-109515-9	CV0511AB3-CS0-4"	Solid	01/26/2015 1445	01/31/2015 0852
680-109515-10	CV0511AB2-GS6"	Solid	01/26/2015 1515	01/31/2015 0852
680-109515-11	CV0511AB2-GS12"	Solid	01/26/2015 1520	01/31/2015 0852
680-109515-12	CV0511AB2-GS18"	Solid	01/26/2015 1525	01/31/2015 0852
680-109515-13	CV0511AB2-GS24"	Solid	01/26/2015 1530	01/31/2015 0852
680-109515-14	CV0511AB2-CS0-4"	Solid	01/26/2015 1515	01/31/2015 0852

ATTACHMENT B
CASE NARRATIVE

CASE NARRATIVE
Client: Oneida Total Integrated Enterprises LLC
Project: 35th Avenue Superfund Site
Report Number: 680-109515-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In the event of interference or analytes present at high concentrations, samples may be diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

RECEIPT

The samples were received on 1/31/2015 8:52 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.3° C and 2.1° C.

SEMIVOLATILE ORGANIC COMPOUNDS (GC/MS) LOW LEVEL PAH

Samples CV0511A-CS6" (680-109515-1), CV0511A-CS12" (680-109515-2), CV0511A-CS18" (680-109515-3), CV0511A-CS24" (680-109515-4), CV0511AB3-GS6" (680-109515-5), CV0511AB3-GS12" (680-109515-6), CV0511AB3-GS18" (680-109515-7), CV0511AB3-GS24" (680-109515-8), CV0511AB3-CS0-4" (680-109515-9), CV0511AB2-GS6" (680-109515-10), CV0511AB2-GS12" (680-109515-11), CV0511AB2-GS18" (680-109515-12), CV0511AB2-GS24" (680-109515-13) and CV0511AB2-CS0-4" (680-109515-14) were analyzed for Semivolatile Organic Compounds (GC/MS) Low level PAH in accordance with EPA SW846 Method 8270D. The samples were prepared on 02/02/2015 and analyzed on 02/06/2015 and 02/07/2015.

Method(s) 8270D_LL_PAH: Manual integration was performed on the following sample(s): CV0511AB2-GS12" (680-109515-11), CV0511AB2-GS18" (680-109515-12), CV0511AB2-GS24" (680-109515-13), CV0511AB3-CS0-4" (680-109515-9), CV0511AB3-GS12" (680-109515-6), CV0511AB3-GS24" (680-109515-8), CV0511A-CS12" (680-109515-2), CV0511A-CS24" (680-109515-4), CV0511A-CS6" (680-109515-1), CV0511AB2-CS0-4" (680-109515-14), CV0511AB2-GS6" (680-109515-10), CV0511AB3-GS6" (680-109515-5), CV0511A-CS18" (680-109515-3).

Method(s) 8270D_LL_PAH: The following sample(s) was diluted due to the nature of the sample matrix: CV0511AB2-CS0-4" (680-109515-14), CV0511AB2-GS6" (680-109515-10), CV0511AB3-GS6" (680-109515-5). Due to the dilution, surrogate recoveries are outside control limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

METALS (ICP)

Samples CV0511A-CS6" (680-109515-1), CV0511A-CS12" (680-109515-2), CV0511A-CS18" (680-109515-3), CV0511A-CS24" (680-109515-4), CV0511AB3-GS6" (680-109515-5), CV0511AB3-GS12" (680-109515-6), CV0511AB3-GS18" (680-109515-7), CV0511AB3-GS24" (680-109515-8), CV0511AB3-CS0-4" (680-109515-9), CV0511AB2-GS6" (680-109515-10), CV0511AB2-GS12" (680-109515-11), CV0511AB2-GS18" (680-109515-12), CV0511AB2-GS24" (680-109515-13) and CV0511AB2-CS0-4" (680-109515-14) were analyzed for Metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 02/02/2015 and analyzed on 02/03/2015 and 02/04/2015.

Method(s) 6010C: The following sample(s) was diluted due to the presence of manganese which interferes with lead: CV0511A-CS12" (680-109515-2), CV0511A-CS24" (680-109515-4). Elevated reporting limits (RLs) are provided.

Method(s) 6010C: The following sample(s) was diluted due to the presence of iron which interferes with aluminum, arsenic, and lead: CV0511A-CS18" (680-109515-3). Elevated reporting limits (RLs) are provided.

Aluminum, Arsenic and Iron have recovery outside criteria high for the MS of sample CV0511AB3-GS12"MS (680-109515-6) in batch 680-369546.

Aluminum and Iron have recovery outside criteria high for the MSD of sample CV0511AB3-GS12"MSD (680-109515-6) in batch 680-369546.

The presence of the '4' qualifier indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

Refer to the QC report for details.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

PERCENT SOLIDS/MOISTURE

Samples CV0511A-CS6" (680-109515-1), CV0511A-CS12" (680-109515-2), CV0511A-CS18" (680-109515-3), CV0511A-CS24" (680-109515-4), CV0511AB3-GS6" (680-109515-5), CV0511AB3-GS12" (680-109515-6), CV0511AB3-GS18" (680-109515-7), CV0511AB3-GS24" (680-109515-8), CV0511AB3-CS0-4" (680-109515-9), CV0511AB2-GS6" (680-109515-10), CV0511AB2-GS12" (680-109515-11), CV0511AB2-GS18" (680-109515-12), CV0511AB2-GS24" (680-109515-13) and CV0511AB2-CS0-4" (680-109515-14) were analyzed for Percent Solids/Moisture in accordance with EPA SW-846 Method 9045. The samples were prepared on 02/02/2015 and analyzed on 02/03/2015 and 02/04/2015.

(680-109515-11), CV0511AB2-GS18" (680-109515-12), CV0511AB2-GS24" (680-109515-13) and CV0511AB2-CS0-4" (680-109515-14) were analyzed for Percent Solids/Moisture in accordance with TestAmerica SOP. The samples were analyzed on 01/31/2015.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

ATTACHMENT C
QUALIFIED SAMPLE RESULTS

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	CV0511A-CS6"	Lab Sample ID:	680-109515-1
Lab Name:	TestAmerica Savannah	Job No.:	680-109515-1
SDG ID.:	680-109515-01		
Matrix:	Solid	Date Sampled:	01/26/2015 13:50
Reporting Basis:	DRY	Date Received:	01/31/2015 08:52
% Solids:	74.0		

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	15000	24	12	mg/Kg			1	6010C
7440-38-2	Arsenic	30	2.4	0.69	mg/Kg			1	6010C
7439-89-6	Iron	62000	24	8.2	mg/Kg			1	6010C
7439-92-1	Lead	67	1.2	0.62	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511A-CS12" Lab Sample ID: 680-109515-2
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 13:55
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 88.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	15000	22	11	mg/Kg			1	6010C
7440-38-2	Arsenic	33	2.2	0.65	mg/Kg			1	6010C
7439-89-6	Iron	97000	22	7.7	mg/Kg			1	6010C
7439-92-1	Lead	68	11	5.9	mg/Kg			10	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511A-CS18" Lab Sample ID: 680-109515-3
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 14:00
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 83.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	18000	210	100	mg/Kg			10	6010C
7440-38-2	Arsenic	39	21	6.1	mg/Kg			10	6010C
7439-89-6	Iron	130000	210	72	mg/Kg			10	6010C
7439-92-1	Lead	34	10	5.5	mg/Kg			10	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511A-CS24" Lab Sample ID: 680-109515-4
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 14:05
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 83.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	15000	23	12	mg/Kg			1	6010C
7440-38-2	Arsenic	24	2.3	0.69	mg/Kg			1	6010C
7439-89-6	Iron	70000	23	8.2	mg/Kg			1	6010C
7439-92-1	Lead	40	12	6.2	mg/Kg			10	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	CV0511AB3-GS6"	Lab Sample ID:	680-109515-5
Lab Name:	TestAmerica Savannah	Job No.:	680-109515-1
SDG ID.:	680-109515-01		
Matrix:	Solid	Date Sampled:	01/26/2015 14:35
Reporting Basis:	DRY	Date Received:	01/31/2015 08:52
% Solids:	73.9		

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	16000	23	11	mg/Kg			1	6010C
7440-38-2	Arsenic	28	2.3	0.67	mg/Kg			1	6010C
7439-89-6	Iron	48000	23	8.0	mg/Kg			1	6010C
7439-92-1	Lead	32	1.1	0.60	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	CV0511AB3-GS12"	Lab Sample ID:	680-109515-6
Lab Name:	TestAmerica Savannah	Job No.:	680-109515-1
SDG ID.:	680-109515-01		
Matrix:	Solid	Date Sampled:	01/26/2015 14:40
Reporting Basis:	DRY	Date Received:	01/31/2015 08:52
% Solids:	73.9		

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	14000	24	12	mg/Kg			1	6010C
7440-38-2	Arsenic	13	2.4	0.71	mg/Kg			1	6010C
7439-89-6	Iron	27000	24	8.4	mg/Kg			1	6010C
7439-92-1	Lead	63	1.2	0.63	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB3-GS18" Lab Sample ID: 680-109515-7

Lab Name: TestAmerica Savannah Job No.: 680-109515-1

SDG ID.: 680-109515-01

Matrix: Solid Date Sampled: 01/26/2015 14:45

Reporting Basis: DRY Date Received: 01/31/2015 08:52

% Solids: 76.1

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	13000	26	13	mg/Kg			1	6010C
7440-38-2	Arsenic	5.0	2.6	0.78	mg/Kg			1	6010C
7439-89-6	Iron	15000	26	9.2	mg/Kg			1	6010C
7439-92-1	Lead	21	1.3	0.70	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB3-GS24" Lab Sample ID: 680-109515-8
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 14:50
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 70.8

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	14000	25	12	mg/Kg			1	6010C
7440-38-2	Arsenic	7.3	2.5	0.73	mg/Kg			1	6010C
7439-89-6	Iron	26000	25	8.6	mg/Kg			1	6010C
7439-92-1	Lead	26	1.2	0.65	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB3-CS0-4" Lab Sample ID: 680-109515-9
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 14:45
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 60.6

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	12000	28	14	mg/Kg			1	6010C
7440-38-2	Arsenic	13	2.8	0.83	mg/Kg			1	6010C
7439-89-6	Iron	23000	28	9.9	mg/Kg			1	6010C
7439-92-1	Lead	96	1.4	0.75	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB2-GS6" Lab Sample ID: 680-109515-10
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 15:15
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 84.2

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	12000	21	10	mg/Kg			1	6010C
7440-38-2	Arsenic	22	2.1	0.61	mg/Kg			1	6010C
7439-89-6	Iron	39000	21	7.3	mg/Kg			1	6010C
7439-92-1	Lead	42	1.0	0.55	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB2-GS12" Lab Sample ID: 680-109515-11
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 15:20
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 84.5

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	11000	22	11	mg/Kg			1	6010C
7440-38-2	Arsenic	18	2.2	0.65	mg/Kg			1	6010C
7439-89-6	Iron	31000	22	7.7	mg/Kg			1	6010C
7439-92-1	Lead	32	1.1	0.58	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID:	CV0511AB2-GS18"	Lab Sample ID:	680-109515-12
Lab Name:	TestAmerica Savannah	Job No.:	680-109515-1
SDG ID.:	680-109515-01		
Matrix:	Solid	Date Sampled:	01/26/2015 15:25
Reporting Basis:	DRY	Date Received:	01/31/2015 08:52
% Solids:	74.0		

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	16000	27	13	mg/Kg			1	6010C
7440-38-2	Arsenic	10	2.7	0.78	mg/Kg			1	6010C
7439-89-6	Iron	23000	27	9.3	mg/Kg			1	6010C
7439-92-1	Lead	45	1.3	0.70	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB2-GS24" Lab Sample ID: 680-109515-13
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 15:30
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 75.9

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	16000	22	11	mg/Kg			1	6010C
7440-38-2	Arsenic	12	2.2	0.66	mg/Kg			1	6010C
7439-89-6	Iron	39000	22	7.8	mg/Kg			1	6010C
7439-92-1	Lead	28	1.1	0.59	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: CV0511AB2-CS0-4" Lab Sample ID: 680-109515-14
Lab Name: TestAmerica Savannah Job No.: 680-109515-1
SDG ID.: 680-109515-01
Matrix: Solid Date Sampled: 01/26/2015 15:15
Reporting Basis: DRY Date Received: 01/31/2015 08:52
% Solids: 66.0

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7429-90-5	Aluminum	15000	28	14	mg/Kg			1	6010C
7440-38-2	Arsenic	26	2.8	0.83	mg/Kg			1	6010C
7439-89-6	Iron	48000	28	9.8	mg/Kg			1	6010C
7439-92-1	Lead	80	1.4	0.74	mg/Kg			1	6010C

Sample results have been qualified by URS in accordance with the Non-Industrial Use Property Sampling Event QAPP for the 35th Avenue Removal Site, Birmingham, Alabama. Revision 1 (OTIE, October 2012)